

What Is Claimed Is:

1. A method for displaying a desktop display surface having dimensions, comprising:
 - creating a render target surface having substantially the same dimensions as the desktop display surface;
 - casting the desktop display surface as a texture; and
 - setting the render target surface as a scanout read location in preparation for displaying the desktop display surface.
2. The method of claim 1, further comprising:
 - creating a two dimensional rectangular object; and
 - rendering the two dimensional rectangular object by mapping the desktop display surface texture to the two dimensional rectangular object.
3. The method of claim 2, further comprising storing the rendered two dimensional rectangular object to the render target surface.
4. The method of claim 2, further comprising:
 - storing the rendered two dimensional rectangular object to the render target surface; and
 - scanning out the rendered two dimensional rectangular object from the render target surface.
5. The method of claim 2, further comprising:
 - receiving a zoom factor and one or more offsets; and
 - creating the two dimensional rectangular object according to the zoom factor and the one or more offsets.
6. The method of claim 2, further comprising:
 - receiving a zoom factor and one or more offsets; and
 - calculating the texture addressing coordinates (u, v) of each vertex on the two dimensional rectangular object as a function of the zoom factor and the offsets.
7. The method of claim 2, further comprising:

receiving a zoom factor and one or more offsets; and
calculating a texture addressing extent configured to determine an amount of the desktop display surface texture to be mapped to the two dimensional rectangular object.

8. The method of claim 7, wherein the texture addressing extent is equal to a texture addressing range divided by the zoom factor.

9. The method of claim 2, further comprising:

receiving a zoom factor, an offset in an x direction and an offset in a y direction;

calculating a texture addressing extent configured to determine an amount of the desktop display surface texture to be mapped to the two dimensional rectangular object; and

calculating a set of texture addressing offsets in the x and y directions configured to provide the position on the desktop display surface texture from which the desktop display surface texture is to be mapped to the two dimensional rectangular object.

10. The method of claim 9, wherein the texture addressing offset in the x direction is calculated as the offset in the x direction divided by the dimension of the desktop display surface in the x direction and the texture addressing offset in the y direction is calculated as the offset in the y direction divided by the dimension of the desktop display surface in the y direction.

11. The method of claim 9, wherein creating the two dimensional rectangular object comprises:

setting a texture addressing coordinate u for an upper left hand corner of the two dimensional rectangular object to be equal to the texture addressing offset in the x direction; and

setting a texture addressing coordinate v for the upper left hand corner of the two dimensional rectangular object to be equal to the texture addressing offset in the y direction.

12. The method of claim 9, wherein creating the two dimensional rectangular object comprises:

setting a texture addressing coordinate u for an upper right hand corner of the two dimensional rectangular object to be equal to the texture addressing offset in the x direction plus the texture addressing extent; and

setting a texture addressing coordinate v for the upper right hand corner of the two dimensional rectangular object to be equal to the texture addressing offset in the y direction.

13. The method of claim 9, wherein creating the two dimensional rectangular object comprises:

setting a texture addressing coordinate u for a bottom left hand corner of the two dimensional rectangular object to be equal to the texture addressing offset in the x direction; and

setting a texture addressing coordinate v for the bottom left hand corner of the two dimensional rectangular object to be equal to the texture addressing offset in the y direction plus the texture addressing extent.

14. The method of claim 9, wherein creating the two dimensional rectangular object comprises:

setting a texture addressing coordinate u for a bottom right hand corner of the two dimensional rectangular object to be equal to the texture addressing offset in the x direction plus the texture addressing extent; and

setting a texture addressing coordinate v for the bottom right hand corner of the two dimensional rectangular object to be equal to the texture addressing offset in the y direction plus the texture addressing extent.

15. A method for displaying a desktop display surface, comprising: 

receiving a zoom factor, an offset in an x direction and an offset in a y direction on the desktop display surface;

creating a two dimensional rectangular object using the zoom factor, the offset in the x direction and the offset in the y direction;

casting a desktop display surface as texture; and

rendering the two dimensional rectangular object by mapping the desktop display surface texture to the two dimensional rectangular object.

16. The method of claim 15, further comprising storing the rendered two dimensional rectangular object to a render target surface having substantially the same dimensions as the desktop display surface.

17. The method of claim 16, further comprising scanning out the rendered two dimensional rectangular object from the render target surface.

18. The method of claim 15, wherein creating the two dimensional rectangular object comprises computing a set of texture addressing coordinates (u, v) for an upper right hand corner, an upper left hand corner, a bottom left hand corner and a bottom right hand corner of the two dimensional rectangular object.

19. The method of claim 15, wherein creating the two dimensional rectangular object comprises:

setting a texture addressing coordinate u for an upper left hand corner of the two dimensional rectangular object to be equal to the offset in the x direction divided by the dimension of the desktop display surface in the x direction; and

setting a texture addressing coordinate v for the upper left hand corner of the two dimensional rectangular object to be equal to the offset in the y direction divided by the dimension of the desktop display surface in the y direction.

20. The method of claim 15, wherein creating the two dimensional rectangular object comprises:

setting a texture addressing coordinate u for an upper right hand corner of the two dimensional rectangular object to be equal to the offset in the x direction divided by the dimension of the desktop display surface in the x direction plus the inverse of the zoom factor; and

setting a texture addressing coordinate v for the upper right hand corner of the two dimensional rectangular object to be equal to the offset in the y direction divided by the dimension of the desktop display surface in the y direction.

21. The method of claim 15, wherein creating the two dimensional rectangular object comprises:

setting a texture addressing coordinate u for a bottom left hand corner of the two dimensional rectangular object to be equal to the offset in the x direction divided by the dimension of the desktop display surface in the x direction; and

setting a texture addressing coordinate v for the bottom left hand corner of the two dimensional rectangular object to be equal to the offset in the y direction divided by the dimension of the desktop display surface in the y direction plus the inverse of the zoom factor.

22. The method of claim 15, wherein creating the two dimensional rectangular object comprises:

setting a texture addressing coordinate u for a bottom right hand corner of the two dimensional rectangular object to be equal to the offset in the x direction divided by the dimension of the desktop display surface in the x direction plus the inverse of the zoom factor; and

setting a texture addressing coordinate v for the bottom left hand corner of the two dimensional rectangular object to be equal to the offset in the y direction divided by the dimension of the desktop display surface in the y direction plus the inverse of the zoom factor.

23. A computer system, comprising:

a processor; and

a memory comprising program instructions executable by the processor to:

create a render target surface having substantially the same dimensions as the desktop display surface;

cast the desktop display surface as a texture; and

set the render target surface as a scanout read location in preparation for displaying the desktop display surface.

24. The method of claim 23, wherein the memory further comprises program instructions executable to:

create a two dimensional rectangular object; and
render the two dimensional rectangular object by mapping the desktop display surface texture to the two dimensional rectangular object.

25. The method of claim 23, wherein the memory further comprises program instructions executable to:

store the rendered two dimensional rectangular object to the render target surface; and

scan out the rendered two dimensional rectangular object from the render target surface.